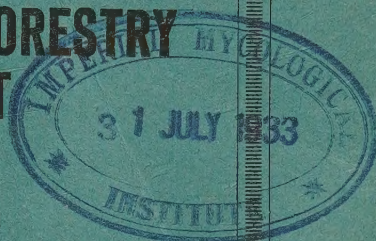
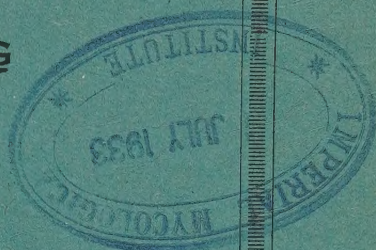


HONG KONG
REPORT
OF THE
BOTANICAL AND FORESTRY
DEPARTMENT
FOR THE YEAR
1932



PRINTED BY NORONHA & CO.
GOVERNMENT PRINTERS



Annual Report of the Botanical & Forestry
Department, Hong Kong, for the year 1931.

ERRATUM.

Page 4, para.27 - for Dendrobium read Dendrolimu

HONG KONG.

REPORT ON THE BOTANICAL AND FORESTRY DEPARTMENT FOR THE YEAR 1932.

GENERAL.

The weather during the early part of the year was favourable to both gardening and forestry operations; the continued heavy rains in June had a very beneficial effect on all newly planted roadside trees and plantations.

2. The rainfall for the year, as recorded by the gauge in the New Garden, was 92.58 inches in 126 days as against 87.16 inches in 177 days in the preceding year.

3. Typhoon signals were hoisted on eight occasions during the year; no serious damage was done to either gardens or plantations, the gale of September 17th destroyed two large specimens of *Aleurites triloba* in Nathan Road, Kowloon and blew down 300 small roadside trees in various parts of the Colony.

GARDENS, PARKS AND GROUNDS.

4. *Botanic Gardens*.—The Fountain and Lower Terraces, where a reservoir is being constructed, were in the hands of the Public Works Department during the whole year.

5. The turfed area which adjoins the Garden Road boundary of the Old Garden was planted with a line of sixty-eight *Phoenix Roebelinii*.

6. The turfing of the extreme south corner of the Old Garden was completed during the rainy season; the development of this area was not commenced until 1931.

7. The number of trees, shrubs and pot plants sold during the year was 2,338.

8. *Government House Grounds*.—The major portion of the lawn in front of the house was broken up, relevelled and turfed.

9. *Colonial Cemetery*.—Large numbers of wild trees were removed from the vicinity of burial plots and banks in the upper portions of the cemetery, this work has been regularly carried on during the past three years and the turfed areas have in consequence very much improved.

10. *Kowloon Hospital Grounds*.—Extensive areas of turf were lifted from sites marked out for additional buildings, the lifted turf was relaid on banks and flat areas adjoining the newer buildings on the north side of the grounds. The large grass bank on the south side was again sown with seeds of *Pinus Massoniana*.

11. *Mountain Lodge; Colonial Secretary's Residence; Cenotaph Plots; West End Park; King's Park; Civil Hospital; Mental Hospital; Senior Officers' Quarters, Leighton Hill; Indian School; Statue Square Plots; Victoria Hospital; Homestead Quarters; Government Pavilions and Villas; Royal Observatory; Kowloon Magistracy; Government Offices; Parade Ground, Volunteer Headquarters and The Eyrie*. The areas of ground, under the control of this Department, at the places mentioned were kept in good order generally; undesirable undergrowth was regularly cleared, additional trees and shrubs were planted where possible, grass banks and lawns, trees, shrubs and flower beds were given such attention as they required.

HERBARIUM AND LIBRARY.

12. Thirty local plant specimens were added to the herbarium, twelve new books were purchased and in addition to these 650 bulletins and other publications were added to the library. Many specimens of botanical interest and medicinal value were identified for local collectors and institutions in the Colony and elsewhere.

FORESTRY.

13. *Formation of Pine Tree Plantations*.—Extensive areas were dealt with during the year, the number of sowings, *in situ*, of seeds of *Pinus Massoniana* amounted to 259,085 as against 94,753 in the previous year. Areas dealt with were hills adjoining Shek Li Pui reservoir, Kowloon Tsai, Kowloon Tong, Mt. Collinson, Tai Shu Wan, Bennets Hill, Mount Cameron, Stanley East Catchwater, Sai Kung Road, Ping Shan Land Office and Taipo Kau Forestry Reserve.

14. Broadcast sowings of seeds of *Pinus Massoniana* were carried out in extensive areas, the majority of the areas so dealt with had been recently cleared of trees damaged by forest fires; the total weight of seed used was 2,031 pounds.

15. *Pine Seed Collection*.—The Fan Ling plantations produced a fair crop of cones, these were collected and 515 pounds of seeds extracted.

16. *Broad-leaved Trees Planted*.—Plantations of varying sizes, composed of the following trees were formed in reserves, Pine plantations and suitable areas, in all parts of the Colony,

Acacia confusa, *Acacia pennata*, *Bischofia javanica*, *Aleurites Fordii*, *Aleurites montana*, *Aleurites triloba*, *Sterculia lanceolata*, *Cunninghamia sinensis*, *Tristania conferta*, *Crataeva religiosa*, *Celtis sinensis*, *Melia Azedarach*, *Poinciana regia*, *Bauhinia variegata*, *Bauhinia Blakeana*, *Garcinia oblongifolia*, *Melaleuca Leucadendron*, *Cinnamomum Camphora*, *Artocarpus hypargyrea*, and *Liquidambar formosana*.

17. *Cheung Chau*.—A small tree nursery has been established on the island; 480 one year old Pine seedlings were planted on the slopes below the church, 260 mixed broad-leaved trees were planted on roadsides.

18. *Aleurites montana* again produced a heavy crop of seeds, *Aleurites Fordii* produced an exceptionally small crop, *Cunninghamia sinensis*, in all parts of the Colony failed to produce a single seed.

19. *Insect Pests*.—Pine Tree Caterpillars (*Dendrolimus punctatus*) appeared in large numbers, in various parts of the Colony, throughout the whole year; in some areas the pests died out before maturing, in other areas where the Pines were being stripped, they were collected and buried; the record cold day in March and the cold season generally did not kill off or in any way check the movements of the caterpillars this year. The total weight of those collected and destroyed amounted to $7\frac{2}{3}$ tons.

20. *Forest and Hill Fires*.—A total of 71 fires occurred during the year as against 65 in 1931, in Government plantations such fires were responsible for the destruction of 5,000 young Pines; the worst case of damage to a licensed plantation was at Kam Tsin, where 4,500 Pines were destroyed, by a single fire, the cause of which could not be traced.

21. Some weeks before the Ching Ming and Chung Yeung Festivals, notices requesting persons to take all possible precautions against setting fire to plantations, undergrowth and grass were posted in all parts of the Colony; immediately before the festival days, large portable notices were displayed at the entrances to all principal cemeteries and 7,000 handbills were distributed. No serious fires occurred on either day.

22. In outlying districts prompt action by Police prevented serious damage being caused by fires to both Government and privately owned plantations.

23. *Taipo Kau Forestry Reserve*.—The China Fir (*Cunninghamia sinensis*) plantation was extended by the planting of 12,000 young trees; other existing plantations were enlarged and new ones formed, the whole of the stock of young trees used in this work was raised in the nursery, formed on old cultivated ground when the area was first taken over as a reserve.

24. The large bridge over the stream at the top of the reserve, which was destroyed by storm damage in 1931 was rebuilt.

25. *Protection of Plantations.*—Total lengths of old fire barriers and forestry paths cleared were $45\frac{1}{2}$ miles and $41\frac{1}{2}$ miles respectively. The forestry path in Mount Collinson was extended and one new fire barrier made; 33 new fire barriers were made round the same number of old graves on Red Hill, Stanley.

26. *Undergrowth Clearing.*—Anti-malarial clearing was carried on, in all parts of the Colony, the total area cleared for this purpose was 2,702,210 square feet. For other purposes, such as work in connection with the formation of reservoirs, roads, other public improvements and building sites the areas cleared totalled 3,434,520 square feet.

27. *Forest Guards Services.*—The worst cases of damage to Pine plantations were in the Aberdeen and Diamond Hill districts.

28. Forest Guards arrested and charged 140 persons with forestry offences, 113 were convicted and fined or sentenced to terms of imprisonment. The Police arrested and charged 201 persons and 190 were convicted. Eleven persons who were convicted of two or more forestry offences were banished.

29. *Trees Felled.*—The thinning of the Fan Ling Pine plantations was commenced. The removal of large areas of Pine and wild trees was carried out at Tytam Valley in connection with the construction of water catchments and reservoirs.

30. Large shade trees were removed in many parts of the Colony on account of the necessity for road widening and the development of building sites, the areas from which such trees were removed were as follows Wong Nei Chong, Wanchai, Wyndham Street, Pokfulum Road, Robinson Road and Aberdeen.

31. *Miscellaneous Planting.*—Statue Square was replanted with young trees of *Bauhinia variegata*; the old trees which made such a fine show during the early months of the year were almost entirely wiped out by gales during the past three years. On account of the continuous damage caused by motor cars carelessly parked, each of the young trees has been protected by a very strong all metal tree guard; this has so far protected them from serious damage.

32. An experimental planting of *Acacia pennata* as a hedge plant was commenced in West End Park.

33. Shade trees (*Aleurites triloba*) were planted in the newly formed open area at Aberdeen Market.

AGRICULTURE, ETC.

34. *Fan Ling Experimental Garden*.—Two plots of certified Canadian seed potatoes (Netted Gem and Early Rose) were planted and were making rapid growth at the end of the year. *Cajanus indicus* was grown in the Citrus plot and proved to be a very effective shade plant. A plot of foreign vegetables was cultivated for demonstration purposes and for exhibition at the New Territories Agricultural Show, which was held at Shek Wu Hui on January 9th.

35. A grant of \$750.00 was made by the General Committee of the Empire Products Fair for the purpose of encouraging the cultivation of all classes of vegetables and fruits and the use of chemical fertilizers in the New Territories; seed of native and foreign vegetables and fruits and chemical fertilizers were purchased and distributed in various centres in the New Territories by the Assistant Supervisor and Mr. Fung Kei Cheuk.

36. *Inspection of Nursery Stock and Vegetable Products*. *Narcissus Tazetta*.—Nineteen consignments totalling 183,450 bulbs were inspected and passed for export to Britain, Canada, Honolulu, Germany and Denmark. Twenty-seven consignments of Sugar Cane, totalling 214,800 pieces, were passed for export to the Straits Settlements. Eighty-six lots of dried and fresh vegetable products were passed for export to the Philippine Islands and fourteen lots of miscellaneous live plants, consigned to various countries, were inspected and certified as fit for export.

SEED COLLECTION.

37. Seeds of the following were collected for local use and for the purpose of exchange:—*Leucaena glauca*, *Liquidambar formosana*, *Callistemon rigidus*, *Callistemon lanceolata*, *Tristania conferta*, *Cassia glauca*, *Atalantia Hindsii*, *Caesalpinia vernalis*, *Poinciana regia*, *Bischofia javanica*, *Acacia Cunninghamii*, *Bauhinia variegata*, *Iris speculatrix*, *Broussonetia papyrifolia*, *Celtis sinensis*, *Sterculia lanceolata*, *Acacia confusa*, *Cassia fistula*, *Artocarpus hypargyrea*, *Casuarina equisetifolia*, *Albizzia Lebbek*, *Ficus retusa*, *Garcinia oblongifolia*, *Aleurites triloba*, *Aleurites Fordii*, *Aleurites montana*, *Biota orientalis*, *Diospyros Tutcheri*, *Diospyros Morrisiana*, *Datura alba*, *Rhodomyrtus tomentosa*, *Quercus cornea*, *Castanopsis tribuloides*, *Phoenix Roebelinii*, *Strychnos angustiflora*, *Acacia pennata*, *Gironniera nitida*, *Tutcheria spectabilis*, *Sapium discolor*, *Eucalyptus maculata*, *Quercus thalassica*, *Rhodoleia Championi* and *Melia Azedarach*.

EXCHANGE OF SEEDS, ETC.

38. The Department is indebted to the following donors of seeds, plants, &c. The Director, Arnold Arboretum, Harvard University, U.S.A.; The Consul-General for the United States of America (Hong Kong); The Curator, Royal Botanic Garden,

Edinburgh; The Curator of the Herbarium, Royal Botanic Garden, Calcutta; The Director, Botanic Garden, Dr. Sun Yatsen's Memorial Park, Nanking, Messrs. G. Ghost & Co., Townend, Darjeeling, India; The Officer in Charge, Division of Horticulture, Department of Agriculture, Aburi, Gold Coast; Professor Juan Balme, F.R.H.S., Botanical Explorer, Apartado 1651, Mexico; The Curator, Royal Botanic Gardens, Peradeniya, Ceylon; Hon. Mr. J. J. Paterson; Professor Woon-yung Chun; Mrs. R. P. Dunlop; Miss Badkin; and Messrs. Chan Fuk (N. T.); W. Dixon (Sydney); D. T. Fullaway (Honolulu); F. H. Oldis (Melbourne); Dr. J. Dunlop; Dr. M. O. Pfister and the Canadian Government Trade Commissioner.

39. The following were the principal recipients:—The Director, Arnold Arboretum, Harvard University, U.S.A.; The Director of Forestry, Department of Agriculture and Natural Resources, Bureau of Forestry, Manila, P. I.; The Director, Imperial Bureau of Agricultural Parasitology, St. Albans, England; The Conservator of Forests, Forestry Department, Sandakan, British North Borneo; Dr. Walter J. Swingle (California); The Chief of Bureau of Introduction, Institute of Plant Industry, Lenigrad, U. S. S. R.; The Director, The Coconut Grove Arboretum, Florida, U. S. A.; The Director, Royal Botanic Gardens, Kew, England; Sir Oscar Warburg, O.B.E., Epsom, England; and Messrs. C. de S'a Nagueira (Macao); W. Dixon (Sydney); F. H. Oldis (Melbourne) and H. Humphreys.

REVENUE AND EXPENDITURE.

40. Statements of Revenue and Expenditure of the Department are given in Tables I, II and III.

H. GREEN,
Superintendent.

19th April, 1933.

Table I.

COMPARATIVE STATEMENT OF EXPENDITURE FOR 1931 AND 1932.

Expenditure.	1931.	1932
	\$	\$
Personal Emoluments*	78,406.83	78,719.67
<i>Other Charges.</i>		
Brushwood Clearing	4,998.20	4,988.45
Conveyance Allowances	2,288.45	2,071.94
Expenses of Collections	190.40	196.80
Field Allowances to Foresters ...	599.89	527.86
Forestry	15,688.97	15,949.86
Forestry Reserve, Taipo Kau ...	3,789.68	3,978.35
Incidental Expenses	349.99	343.13
Library	360.00	299.86
Light	213.53	191.08
Maintenance of Gardens	9,987.14	9,998.70
Protection of Plantations	1,483.55	1,404.19
Transport	986.87	1,439.77
Uniform & Accoutrements	1,064.01	946.09
Upkeep of Car	781.92	985.82
Total Other Charges	42,782.60	43,321.90
Total Botanical & Forestry Dept.	121,189.43	122,041.57

Table II.

COMPARATIVE STATEMENT OF REVENUE, 1931 AND 1932.

Revenue.	1931	1932
	\$	\$
Timber Sales	3,075.95	1,908.65
Plant Sales	968.05	2,652.65
Loan of Plants	155.98	128.60
Forestry Licences	5,721.76	11,005.39*
Other Miscellaneous Receipts..	1,795.93	1,333.70†
Total	11,717.67	17,028.99

* Collected by District Officer.

† Including \$1,200 for Inspection of Nursery Stock as against \$1,760 in 1931.

Table III.

COMPARATIVE STATEMENT OF EXPENDITURE AND REVENUE
FOR THE PAST TEN YEARS.

Year.	Personal Emoluments & Other Charges.	Special Expenditure.	Total Expenditure.	Total Revenue.
	\$	\$	\$	\$
1923.....	74,709.16	2,448.24	77,157.40	15,848.76
1924.....	86,396.80	120.00	86,516.80	13,038.79
1925.....	88,132.99	8,238.64	96,371.63	9,806.95
1926.....	87,757.80	2,230.21	89,988.01	10,798.95
1927.....	95,722.45	—	95,722.45	7,861.76
1928.....	99,178.99	—	99,178.99	8,849.35
1929.....	101,146.23	—	101,146.23	11,885.97
1930.....	120,565.39	3,809.67	124,375.06	12,376.46
1931.....	121,189.43	—	121,189.43	11,717.67
1932.....	122,041.57	—	122,041.57	17,028.99

